WEILUN SUN (孙伟伦)

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EDUCATION	**BS**	**Tsinghua University**, Computer Science & Technology, *2010~2014* Overall GPA: 88/100 Rank: 28/126

HONORS AND AWARDS

First Prize of Beijing University Physics Olympiads, 2011

2nd place of Tsinghua Talent Show, 2012
Performed solo street soccer

SMALL PROJECT

Experiments of Machine Learning Methods in SIGGRAPH 2012 Paper *Sketch-based Shape Retrieval*, May. 2013

- Replaced k-means clustering presented in the paper with different clustering methods including fitting Spherical Gaussians with EM algorithm and k-medoids
- Made comparisons among different methods by statistics and retrieval results
- Implemented a complete retriever software with GUI using FLTK lib

Simple 3D Physics Engine, Jan. 2013

- Implemented rigid body collisions between sphere and net or fixed objects in any shape with friction under gravity field
- Took spinning into consideration
- Simulated net system using rigid spheres to represent knots and weightless springs to represent cords
- Created a basketball shooting game using the engine with appealing effects of interactions between basketball and hoop net

Drum Sound Extraction and Classification, together with Yi-Ning Liu and E.T. Chan, Oct. 2012 ~ Dec. 2012

- Implemented drum sound extraction algorithm by Matlab
- Developed a game on ios like *Taiko Drum Master*, but can

automatically turn a new song track into a game level

RESEARCH EXPERIENCE	**SIGGRAPH ASIA 2013 PAPER** *Anisotropic Spherical Gaussians*, Tsinghua Graphics & Geometry Computing Group, Feb. 2013 ~ May. 2013

Advisor: Kun Xu
- Involved in the discussion and proofread some derivations of the new spherical function
- Implemented a rendering program based on theories in the paper
- Made most of result figures in the paper

SIGGRAPH 2013 PAPER *Sketch2Scene:Sketch-based Co-Retrieval and Co-placement of 3D Models*, Tsinghua Graphics & Geometry Computing Group, Sep. 2012 ~ Jan. 2013
Advisor: Kun Xu
- Reproduced a single-model retriever according to SIGGRAPH 2012 paper *Sketch-based Shape Retrieval*
- Implemented part of the GUI in the project
- Involved in the discussion of the co-retrieval methods in the paper

Graduation Project of Yan Gu, Tsinghua Graphics & Geometry Computing Group , Mar. 2012 ~ Jun. 2012
Advisor: Kun Xu
- Reproduced a rendering program according to SIGGRAPH ASIA 2009 paper *All-Frequency Rendering of Dynamic, Spatial-Varying Reflectance*

PUBLICATIONS

Conference Papers

Kun Xu, Wei-Lun Sun, Zhao Dong, Dan-Yong Zhao, Run-Dong Wu, Shi-Min Hu, "Anisotropic Spherical Gaussians," Proceedings of SIGGRAPH ASIA 2013(accepted)

Kun Xu, Kang Chen, Hongbo Fu, Wei-Lun Sun, Shi-Min Hu, "Sketch2Scene: Sketch-based Co-retrieval and Co-placement of 3D Models," Proceedings of SIGGRAPH 2013, ACM Transactions on Graphics 32(4) , 123:1--123:12, 2013.

LANGUAGES

Mandarin Chinese: Native Language
English: GRE V: 550 Q: 800 AW: 3.5
　　　　　　Toefl R: 28 L: 30 S: 23 W: 28 total: 109

COMPUTER SKILLS

Programming: c/c++, Java, Python, Matlab
Applications: OPENGL, GLSL, QT, Android, CUDA
Platforms: Windows, Linux